

WHAT IS CLAIMED IS:

1. A packaging case-encased electro-optical device, comprising:
an electro-optical device where projection light from a light source enters an image display area;
a dust-proof substrate disposed on at least one of a light incident plane and a light emitting plane of the electro-optical device;
a first light blocking film formed on the dust-proof substrate;
a second light blocking film formed on at least one of a pair of substrates, one substrate being placed on a light source side and the other substrate configuring the electro-optical device; and
a packaging case to hold at least a part of a peripheral area in a periphery of the image display area in the electro-optical device and housing the electro-optical device and the dust-proof substrate, the second light blocking film, the first light blocking film, the dust-proof substrate and the packaging case configuring a heat conducting path.
2. The packaging case-encased electro-optical device according to claim 1, at least two of the second light blocking film, the first light blocking film, the dust-proof substrate and the packaging case contacting each other.
3. The packaging case-encased electro-optical device according to claim 2, the first light blocking film and the packaging case contacting each other.
4. The packaging case-encased electro-optical device according to claim 2, the dust-proof substrate and the packaging case contacting each other, and at least one of the first light blocking film, and the second light blocking film, and the packaging case, contacting each other.
5. The packaging case-encased electro-optical device according to claim 1, the packaging case being formed of a material containing at least one of magnesium and aluminum.
6. The packaging case-encased electro-optical device according to claim 1, the dust-proof substrate being formed of sapphire.
7. The packaging case-encased electro-optical device according to claim 1, an end face light blocking film being further formed on an end face of the dust-proof substrate so as to be joined to the first light blocking film.
8. The packaging case-encased electro-optical device according to claim 7, a backside light blocking film being further formed on a surface of the dust-proof substrate

where the first light blocking film is not formed, so as to be joined to the first light blocking film and the end face light blocking film.

9. The packaging case-encased electro-optical device according to claim 1, the first light blocking film being formed of aluminum.

10. The packaging case-encased electro-optical device according to claim 9, the first light blocking film having a multilayer structure of a layer formed of aluminum on the light source side and a layer formed of oxide film on an opposite side thereof.

11. The packaging case-encased electro-optical device according to claim 10, the oxide film containing a chromina (Cr_2O_3) film.

12. The packaging case-encased electro-optical device according to claim 1, the second light blocking film being formed of aluminum.

13. The packaging case-encased electro-optical device according to claim 12, the second light blocking film having a multilayer structure of a layer formed of aluminum on the light source side and a layer formed of chromium or chromina (Cr_2O_3) on an opposite side thereof.

14. The packaging case-encased electro-optical device according to claim 1, at least one of the first light blocking film and the second light blocking film being formed in a grid shape as viewed in plan view.

15. The packaging case-encased electro-optical device according to claim 1, further comprising a sealing material interposed between the pair of substrates configuring the electro-optical device for bonding the pair of substrates,

a shape of the second light blocking film including a closed curve along a perimeter of the substrate placed on the light source side,

a shape of the first light blocking film being a closed curve along a perimeter of the dust-proof substrate, the closed curve including a shape surrounding the second light blocking film, and

the sealing material being formed so as to be covered with the first light blocking film as viewed in plan view.

16. The packaging case-encased electro-optical device according to claim 15, the first light blocking film and the second light blocking film being formed so as to partially overlap each other as viewed in plan view.

17. The packaging case-encased electro-optical device according to claim 1, further comprising a hook to keep the electro-optical device fixed to the packaging case, the hook configuring a part of the heat conducting path.

18. The packaging case-encased electro-optical device according to claim 18, the hook being formed of phosphor bronze.

19. The packaging case-encased electro-optical device according to claim 1, further comprising an intermediate layer disposed between the dust-proof substrate and the packaging case, the intermediate layer configuring a part of the heat conducting path.

20. A projection type display device, comprising:

- a light source;
- a packaging case-encased electro-optical device including:
 - an electro-optical device where projection light from the light source enters an image display area;
 - a dust-proof substrate disposed at at least one of a light incident plane and a light emitting plane of the electro-optical device;
 - a first light blocking film formed on the dust-proof substrate;
 - a second light blocking film formed on at least one of a pair of substrates, one substrate placed on a light source side and the other substrate, configuring the electro-optical device; and
 - a packaging case to hold at least a part of a peripheral area in a periphery of the image display area in the electro-optical device and to house the electro-optical device and the dust-proof substrate, the second light blocking film, the first light blocking film, the dust-proof substrate and the packaging case configuring a heat conducting path;
 - an optical system to guide the projection light to the electro-optical device; and
 - a projection optical system to project the projection light emitted from the electro-optical device.